

Cisco Mobility Express

General information

Q What is the Cisco® Mobility Express solution?

A Cisco Mobility Express is a virtual wireless LAN controller integrated on 802.11ac Wave 2 access points (Cisco Aironet® 4800, 3800, 2800, 1850, 1830, 1815, 1560, and 1540 Series).

Simple by design, Mobility Express is a reliable and affordable branch solution for small and medium-sized businesses and distributed enterprises serving up to 100 access points and 2000 clients. It brings the best practices and quality of Cisco's large- and medium-scale solutions to smaller-scale implementations without additional cost or complexity.

Q Why did Cisco build the Mobility Express solution?

A Historically, Cisco's autonomous access point solution (with no controller capabilities) targeted small deployments, and our wireless controller appliances addressed the requirements of midsize and large organizations. Recently, however, the needs of smaller customers as well as distributed enterprises have evolved. Based on customer and partner feedback, Cisco determined that a controllerless approach, without the need for a physical controller, made sense for smaller deployments. Mobility Express is the solution that implements this approach.

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- Q** **What are the scale limits for the Cisco Mobility Express solution?**
- A** Aironet 1800 and 1540 Series access points running the wireless LAN controller support up to 50 access points and 1000 clients. Aironet 2800, 3800, 4800, and 1560 Series access points running the wireless LAN controller support up to 100 access points and 2000 clients.
- Q** **Can the access point running the wireless LAN controller also service wireless clients?**
- A** Yes, the access point running the wireless LAN controller function can also service clients at the same time.
- Q** **Can 802.11ac Wave 1 access points (Aironet 1700, 2700, and 3700 Series) join a Mobility Express network?**
- A** Yes, 802.11ac Wave 1 access points can join a Mobility Express network and service clients, but they cannot run the wireless LAN controller function on the access points.
- Q** **Can I mix and match different access points in a Mobility Express deployment?**
- A** Yes, you can mix and match access points in a Mobility Express deployment.
- Q** **Is a different access point image needed to run the wireless LAN controller function on the access point?**
- A** Yes, by default access points have the Control and Provisioning of Wireless Access Points protocol (CAPWAP) image. To run the wireless LAN controller function on an access point, the Cisco Mobility Express image for that access point needs to be installed.

- Q** **Can I convert an access point running the CAPWAP protocol to Cisco Mobility Express?**
- A** Yes, all 802.11ac CAPWAP access points can be converted to Mobility Express and vice versa.
- Q** **What are the licensing requirements for Cisco Mobility Express?**
- A** There are no licensing requirements for Mobility Express.
- Q** **What are the management options for Cisco Mobility Express?**
- A** A Mobility Express deployment can be managed using a Command-Line Interface (CLI), a web browser, or, for a multisite deployment, Cisco DNA Center™.
- Q** **Does Cisco DNA Center support Mobility Express?**
- A** Yes, all DNA Center Automation and Assurance use cases are supported for Mobility Express.
- Q** **What features are supported on Cisco Mobility Express when compared to appliance-based wireless LAN controllers?**
- A** Mobility Express is based on the Flex architecture and supports central authentication and local switching of data traffic. For a list and comparison of features, please refer to the feature matrix at: https://www.cisco.com/c/en/us/td/docs/wireless/controller/technotes/8-7/b_feature_matrix_for_802_11ac_wave2_access_points.html

Q What is the difference between Mobility Express and Cisco Meraki® wireless controller functionality?

A Meraki is a mode that puts the wireless controller function in the cloud as a service, while Mobility Express embeds it in local access points. The Meraki wireless cloud service can scale to support an unlimited number of access points and clients, while each instance of Mobility Express supports up to 100 access points and 2000 clients. You can deploy multiple sites with Mobility Express and manage it with DNA Center. A subscription to the Meraki cloud service is required to use Meraki functionality; no license is required to use Mobility Express.

Q What differentiates Cisco Mobility Express from competitive solutions?

A There are several differentiators:

- Simplicity, including default “best practices” settings derived from 10+ years of experience with large- and medium-scale implementations
- Advanced radio resource management capabilities, including Flexible Radio Assignment
- Mobility Express is the value leader for Gigabit Ethernet Wi-Fi and 802.11ac Wave 2 multiuser Multiple-Input Multiple-Output (MU-MIMO) capabilities

Features and functionality

Q Does Cisco Mobility Express support Site Survey?

A Yes, because the wireless LAN controller functionality is integrated into the access point and it is capable of running an internal Dynamic Host Configuration Protocol (DHCP) server, one can use Mobility Express for Site Survey.

Q What WLANs are supported on Cisco Mobility Express?

A Mobility Express supports a variety of WLAN options. For example, open WLAN; WPA2-PSK; WPA2-Enterprise (802.1X); guest WLAN, which includes central web authentication and local web authentication with internal and external splash page, etc.

Q Does Mobility Express support Cisco High Density Experience (HDX)?

A Yes, HDX features such as Cisco CleanAir®, Cisco ClientLink 4.0, and optimized client roaming experience, which help improve network performance in crowded WLAN environments, are supported on Mobility Express. HDX is a feature of the access point hardware, and if the access point supports a feature, Mobility Express also supports it.

Q Is Flexible Radio Assignment supported on Mobility Express?

A Yes, Flexible Radio Assignment is supported on Mobility Express. Flexible Radio Assignment is a feature of the access point hardware, and if the access point supports a feature, Mobility Express also supports it.

Q Does Mobility Express get the benefits of the Apple and Cisco partnership innovations?

A Yes, Mobility Express gets all the benefits of the Apple and Cisco partnership, such as Fast Lane, Wi-Fi optimizations, and Wi-Fi analytics for iOS. You can find more details at: <https://www.cisco.com/c/en/us/solutions/enterprise-networks/wireless-partnership.html>

Q Does Cisco Mobility Express support RADIUS servers?

A Yes, Mobility Express supports up to 6 RADIUS servers.

Q Does Cisco Mobility Express support the ability to assign VLANs to individual WLANs?

A Yes, WLAN-to-VLAN mapping is supported on a per-WLAN basis.

Q Is AAA Override supported on Cisco Mobility Express?

A Yes, AAA Override is supported for the VLAN ID, VLAN Name, ACL, and QoS parameters.

Q What type of roaming does Cisco Mobility Express support?

A Mobility Express supports Layer 2 roaming without mobility groups.

Q Is the Walled Garden feature supported on Cisco Mobility Express?

A Yes, Walled Garden is supported on Mobility Express starting with AireOS Release 8.7.

Q Is Application Visibility and Control (AVC) supported on Cisco Mobility Express?

A Yes, AVC is supported on Mobility Express.

Q Is redundancy supported on Cisco Mobility Express?

A Yes, all Mobility Express access points are capable of running the controller function. If the access point running the wireless LAN controller function goes down for any reason, another Mobility Express access point will be elected to run the wireless LAN controller function. To have redundancy, it is recommended that you have at least two Mobility Express access points in the network.

Q How do I upgrade the software for Mobility Express and connected access points?

A Cisco upgrades your Mobility Express software in the same way that we upgrade software in our WLAN controllers (appliances), using Secure FTP (SFTP), Trivial FTP (TFTP), and HTTP. In addition, you can download software from Cisco.com. Mobility Express centrally manages the software image distribution for the access points connected to the virtual wireless LAN controller.

Q Is Guest Anchor supported on Cisco Mobility Express?

A No, Guest Anchor is not yet supported on Mobility Express.

Q Is multicast DNS (mDNS) gateway supported on Cisco Mobility Express?

A Yes, mDNS gateway functionality is supported starting with AireOS Release 8.8.

Q What capabilities are supported on Cisco Mobility Express with Cisco Connected Mobile Experiences (CMX)?

A Presence analytics, connect, and location are supported with CMX on-premises. In addition, guest onboarding and analytics are supported with CMX Engage.

Q If my needs should change, can I transition from Mobility Express to an appliance-based WLAN controller deployment in the future to scale up the number of wireless access points and clients I can support?

A Yes, you can simply point your Mobility Express-enabled access points to the WLAN controller IP address as the primary controller. This is independent of modes. The WLAN controller will push the right software image and respective configuration to your access points.

Ordering

Q Do I need to order a specific SKU when ordering Cisco Mobility Express?

A

Please see Table 1 for product IDs (SKUs) for ordering Cisco Mobility Express on the Aironet 4800, 3800, 2800, 1850, 1840, 1830, 1815, 1560, and 1540 Series access points.

Table 1. Ordering specifics for Cisco Aironet access points with Mobility Express

SKU	Description
AIR-AP3802I-x-K9C	Cisco Aironet 3800i Access Point
AIR-AP3802E-x-K9C	Cisco Aironet 3800e Access Point
AIR-AP3802P-x-K9C	Cisco Aironet 3800p Access Point
AIR-AP2802I-x-K9C	Cisco Aironet 2800i Access Point
AIR-AP2802E-x-K9C	Cisco Aironet 2800e Access Point
AIR-AP1852I-x-K9C	Cisco Aironet 1850i Access Point
AIR-AP1852E-x-K9C	Cisco Aironet1850e Access Point
AIR-AP1840I-x-K9C	Cisco Aironet 1840i Access Point
AIR-AP1832I-x-K9C	Cisco Aironet 1830i Access Point
AIR-AP1815I-x-K9C	Cisco Aironet 1815i Access Point
AIR-AP1815M-x-K9C	Cisco Aironet 1815m Access Point
AIR-AP1815W-x-K9C	Cisco Aironet 1815w Access Point

Note: x = regulatory domain. Please visit <https://www.cisco.com/go/aironet/compliance> for details.

Q Is Cisco Smart Net Total Care® Service available for Mobility Express?

A

Yes. Smart Net Total Care is offered for the Cisco Aironet 3800, 2800, 1850, 1840, 1830, 1815, 1560, and 1540 Series when used as a host to Mobility Express or as a lightweight access point.